

## Abstract

The method for smelting copper sulfide concentrate essentially consisting of the steps of adding  $\text{SiO}_2$  source material and  $\text{CaO}$  source material for flux to the copper sulfide concentrate, and subjecting the copper sulfide concentrate to oxidation melting to produce slag and at least one selected from the group of white metal and blister copper, so that at least part of  $\text{Fe}$  in the copper sulfide concentrate is removed to the slag while at least part of  $\text{S}$  is removed in the form of  $\text{SO}_2$ , and that copper is concentrated in the form of at least one selected from the group of white metal and blister copper, and wherein the composition of the slag is controlled such that the weight ratio  $\text{CaO}/(\text{SiO}_2 + \text{CaO})$  is in the range of 0.6 to 0.85, while the weight ratio  $\text{Fe}/(\text{FeO}_x + \text{SiO}_2 + \text{CaO})$  is in the range of 0.5 to 0.6.

2025 RELEASE UNDER E.O. 14176